

Abstract

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[Object] A monitoring device for precisely taking out light for a monitor and having a simple structure and able to be made compact is provided.

[Means for Resolution] A lens array 17 is attached to the tip face of an optical fiber array 12 holding optical fibers 14, 15 in parallel. A lens 19 is arranged in the lens array 17 so as to be opposed to the end face of each of the optical fibers 14, 15. A triangular prism 13 is arranged in front of the lens array 17. An incident-emitting face 22 of the triangular prism 13 is inclined with respect to the lens array 17. Signal light L emitted from the optical fiber 14 is converted into parallel light by the lens 19, and is incident to the triangular prism 13. After the signal light L is then totally reflected on the reflecting face 20, the signal light L is incident to a reflecting face 21. The incident angle of the signal light L incident to the reflecting face 21 is slightly smaller than a critical angle of the total reflection. The signal light L is leaked from the reflecting face 21 to the exterior by a constant ratio κ . Accordingly, the amount of the signal light L can be calculated by measuring this leak light L_a .

[Selected Drawing] Fig. 5